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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,801	12/22/2000	Colm Prendergast	A0312/7387/MXS	4649
7590		07/12/2005	EXAMINER	
Randy J. Pritzker		JAMAL, ALEXANDER		
Wolf, Greenfield & Sacks, P.C.		ART UNIT		
600 Atlantic Avenue		PAPER NUMBER		
Boston, MA 02210		2643		

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/747,801

Applicant(s)

PRENDERGAST ET AL.

Examiner

Alexander Jamal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 0205.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,8,9 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,8,9 and 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Based on applicant's amendment filed 4-25-2005, examiner notes that claims 1,8,9 have been amended.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 8,9** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per **claim 8**, in the 3rd line of amended claim 8, it is not clear what 'when present' is referring to (when the hybrids are present or the signals from the impedance circuit are present).

As per **claim 9**, lines 3 and 4 of amended claim 9 refer to selecting "one or more of the at least one adjusted signal" from a plurality of hybrids. It is not clear how one hybrid configuration could produce more than one output signal.

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Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3,8,9,16-18,20-21** rejected under 35 U.S.C. 103(a) as being unpatentable over Bella et al (6115466), and further in view of Thiele (6298046).

As per **claim 1**, Bella discloses a telephony device that may support various protocols (ADSL/POTS line: ABSTRACT). Bella's device comprises termination impedance circuit 210,230 (Fig. 2) to provide a termination impedance of the device. The impedance is selectable based upon the on/off-hook state of the phone (Col 3 lines 5-

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45). However, Bella does not disclose an additional adaptable echo cancel circuit (examiner notes that the 'echo cancel' circuit of claim 1 performs the functions of a transmit/receive hybrid circuit as per applicant's specification).

Thiele discloses an adaptive hybrid circuit (Figs. 9-12: Thiele) that is controllable via signals that control the switches of Figs. 9-11. Bella discloses that the termination impedance circuit may be used with a hybrid circuit (Fig. 3C: Bella). Thiele discloses that the adaptable hybrid can provide greater compatibility in matching line impedances (Col 3 lines 7-25, Col 4 lines 15-34). It would have been obvious to one of ordinary skill in the art at the time of this application to implement an adaptive echo canceling circuit (hybrid) for the purpose of greater compatibility with varying line impedances.

As per **claim 2**, in Bella, the dual mode POTS filter 230 has first and second impedance elements that switchably provide the on/off hook impedances (Fig. 5).

As per **claim 3**, in Bella, the termination impedance circuit comprises termination capacitors (Fig. 2) in series with the terminating impedance elements 230,210.

As per **claim 8**, Thiele's device comprises a plurality of hybrids implemented through various switch configurations of Figs. 9-11.

As per **claim 9**, the switches of Thiele Figs. 9-11 are a multiplexer with the switchable circuitry implementing a plurality of echo-cancel hybrids.

As per **claim 16**, claim rejected for same reasons as claim 1 rejection.

As per **claim 17**, in Bella, the device response to a 'hook signal' (item 248 in Fig. 2).

As per **claim 18**, in Bella, in the off-state, the phone is on-hook and the loop impedance is greater. In the on-state, the phone is off-hook and the loop impedance is lower.

As per **claim 20**, in Bella, the ADSL frequency range is greater than the POTS frequency range.

As per **claim 21**, since Bella's device is functional with the ADSL signaling, the magnitude of the impedance for the ADSL signaling is inherently substantially constant for all frequencies in the ADSL frequency range for the purpose of allowing the data within the frequency band to be detected accurately (without the large variations in-signal amplitude versus frequency).

5. **Claim 19** rejected under 35 U.S.C. 103(a) as being unpatentable over Bella et al (6115466) and Thiele (6298046).

As per **claim 19**, Bella and Thiele disclose a terminating device as per claims 1 and 18. However, They do not specify that the magnitude of the impedance is greater than 2000 ohms for on-hook and around 600 ohms for off-hook, and around 100 ohms for the ADSL.

Bella's terminating device is used with a POTS device and ADSL modem. Examiner takes official notice that it is well known in the art that off-hook telephone line termination impedances are 600 ohms, ADSL termination impedances are 100 ohms, and on-hook impedances are greater than about 2000 ohms. This information is disclosed as prior art in applicant's specification page 5. It would have been obvious to one of

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ordinary skill in the art at the time of this application that the magnitude of the impedance for the terminating device would correspond to the well-known POTS and ADSL standards for the purpose of being compatible with POTS and ADSL devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9315 for After Final communications.

AJ
June 30, 2005


CURTIS KUNTZ
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2600